Ocean Observatories Initiative

Cyberinfrastructure Integration Architecture

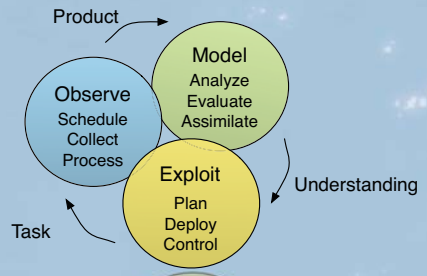
NOAA IPT Team Meeting

August 11, 2009

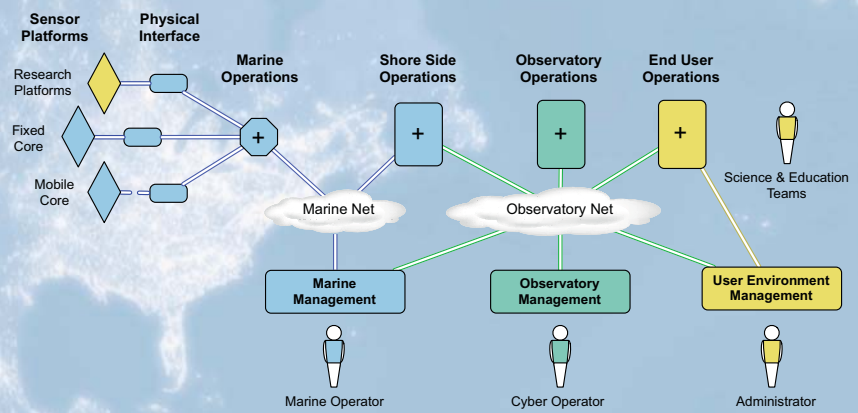
Science & Education Operations

- Interactive Ocean Observing
- Interactive Ocean Modeling & Data Assimilation
- Automated Data Product Generation
- Discipline-Driven Semantic Organization of Data
- Interactive Instrument Network
- Integrated Observatory Management
- User-Driven Integration of Resource

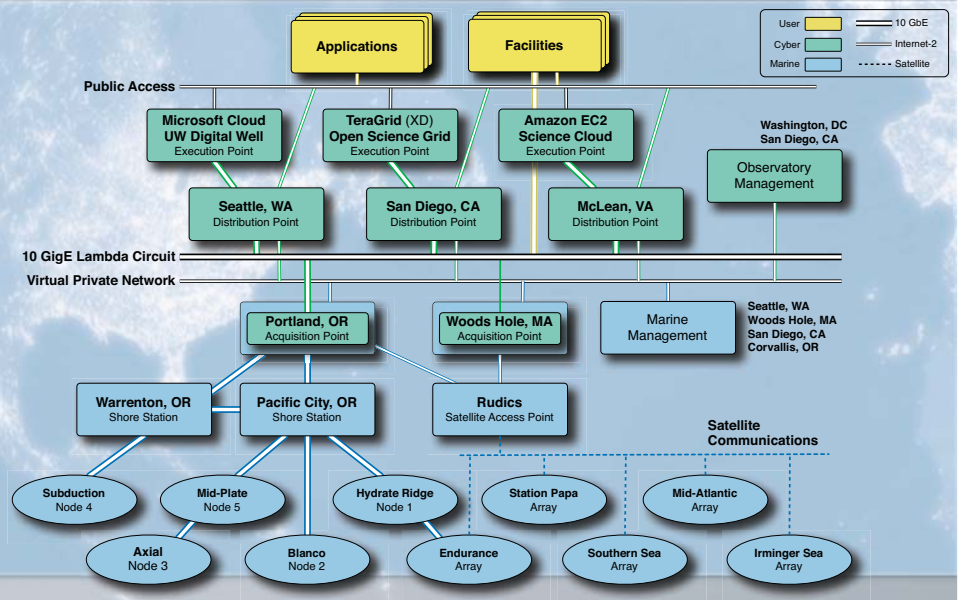
Observatory Activity Model



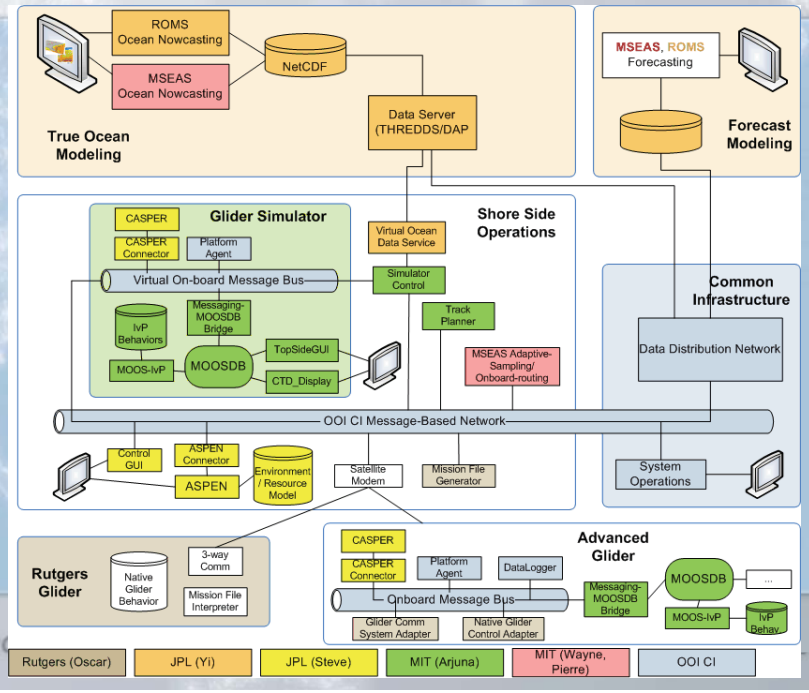
Integrate Observatory Network



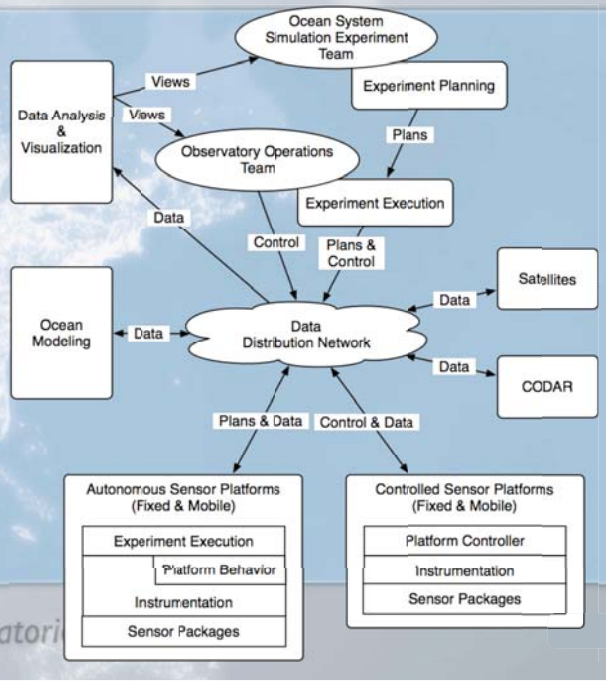
Implementation



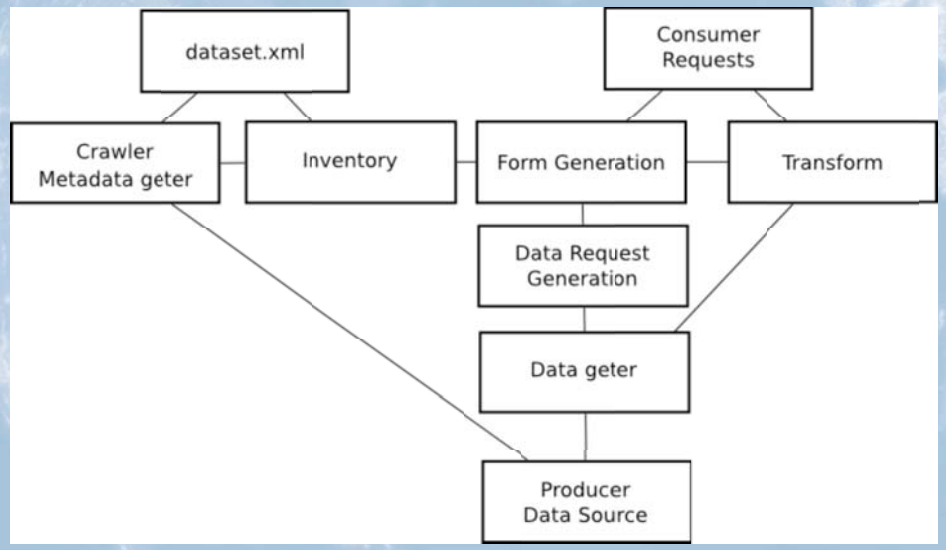
OSSE Prototype



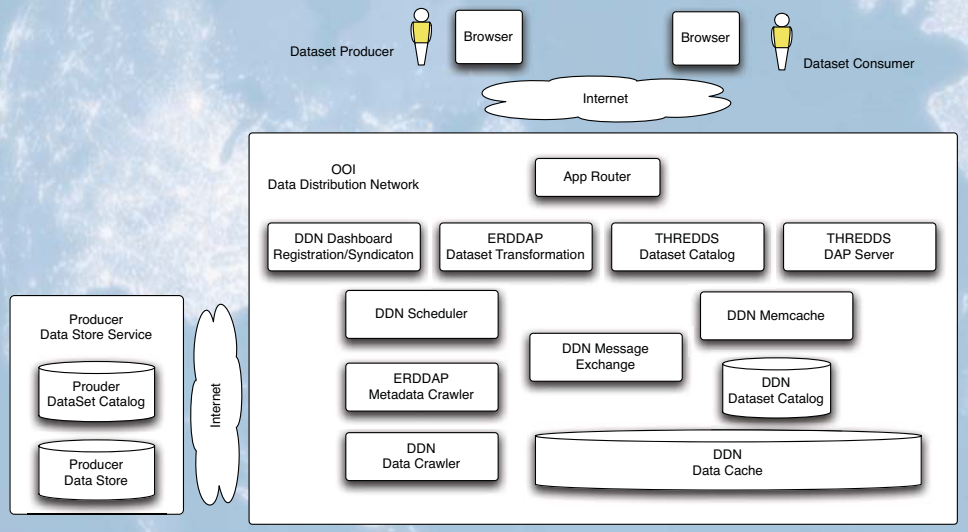
OSSE Architecture



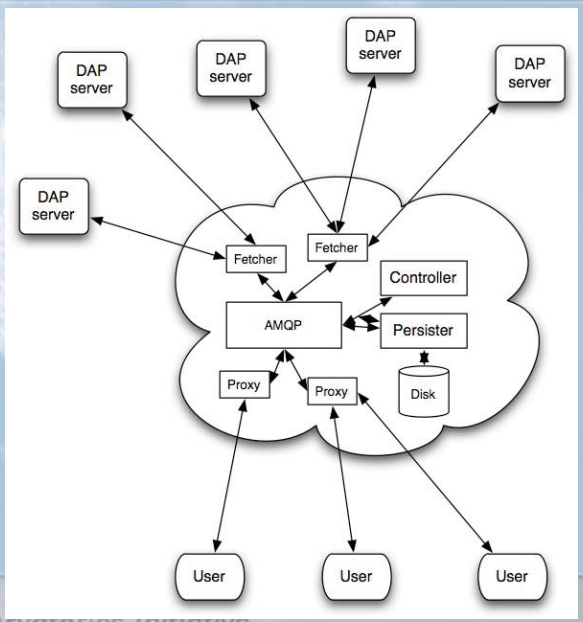
ERDDAP Decomposition



Data Exchange Prototype I

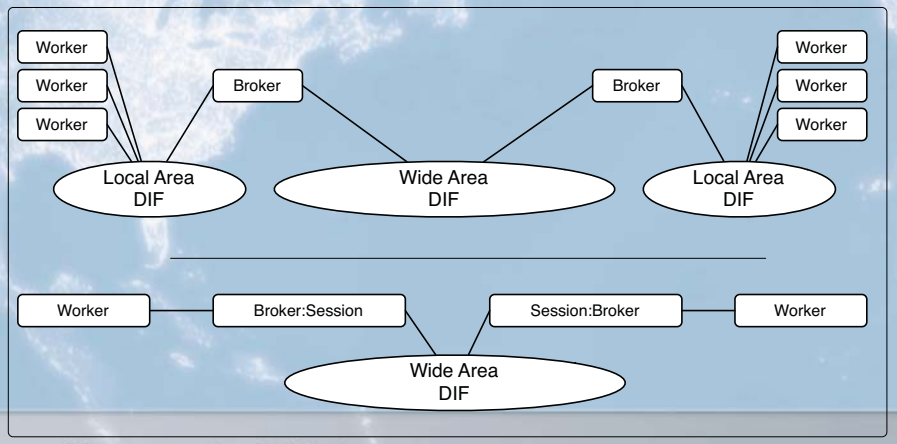


Data Exchange: DAP Cloud Service

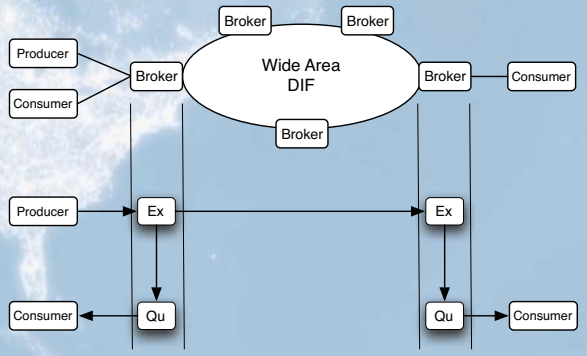


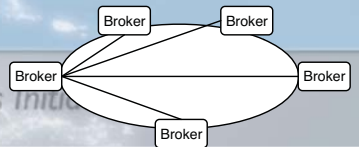
OOI Exchange Space Abstraction

OOI Exchange Space Realized as a Combined AMQP / Distributed IPC Facility (DIF) Abstraction

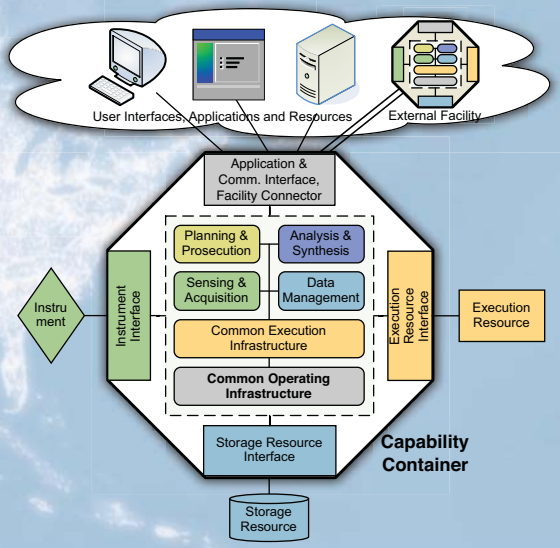


OOI Exchange Space Realized as a Combined AMQP / DIF Abstraction

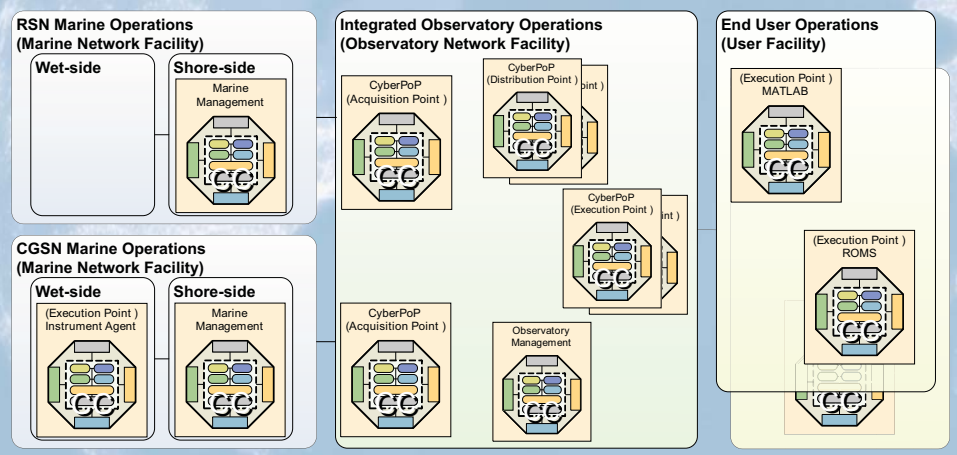




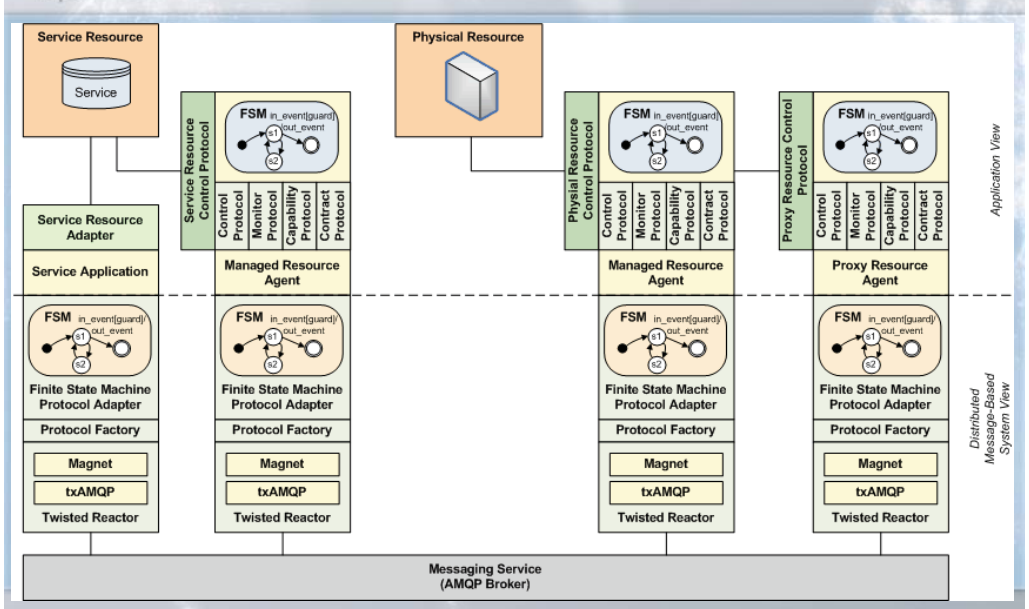
Composable Capability Containers



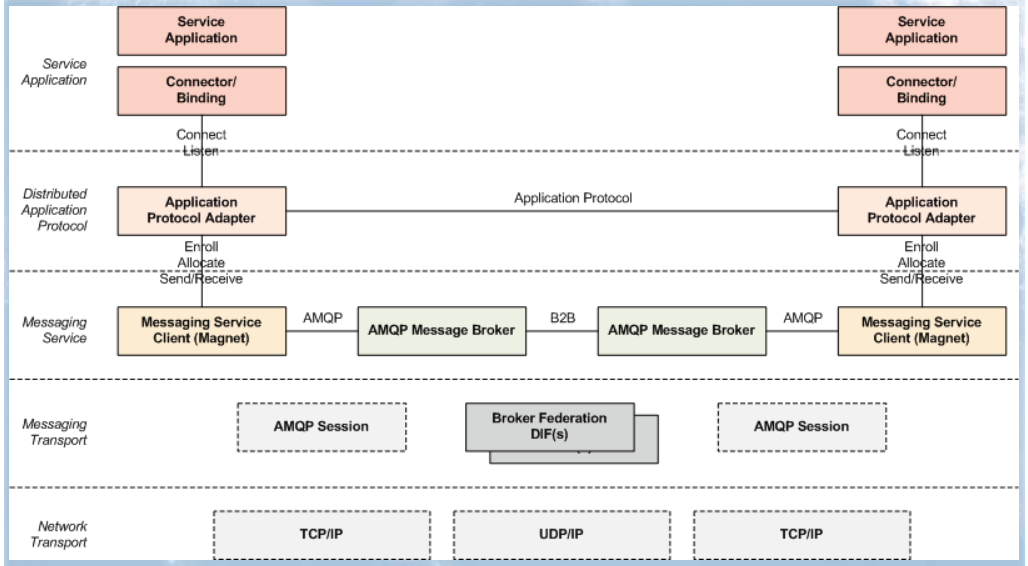
Deployment of Capability Containers



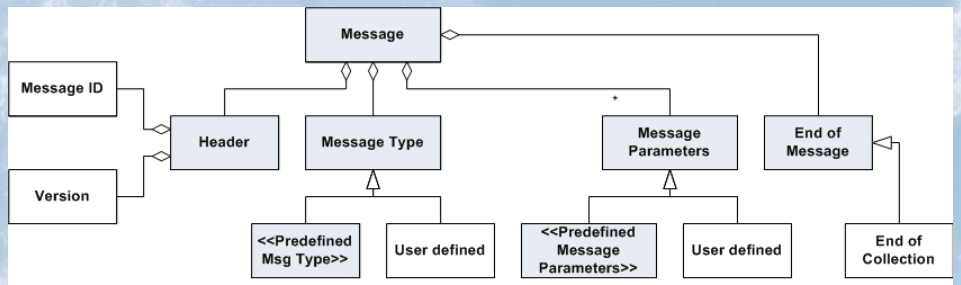
Distribute Application Facility



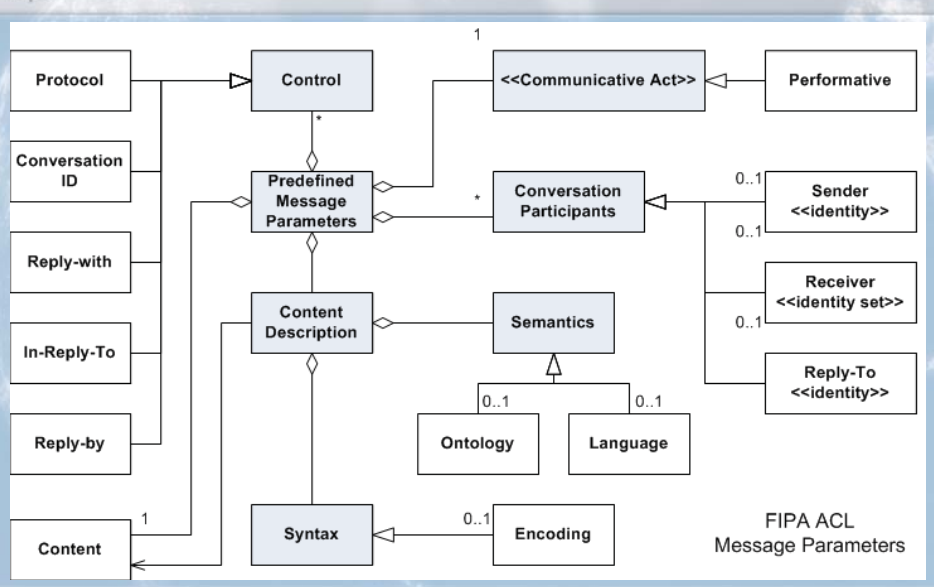
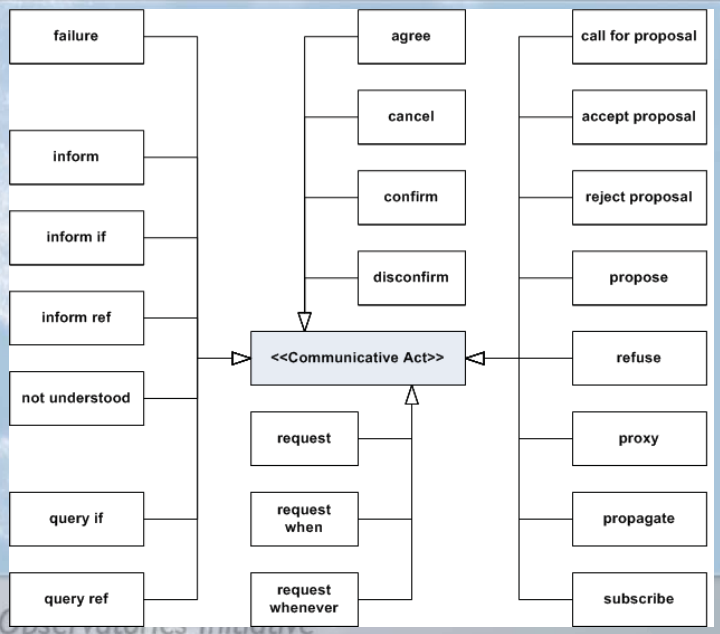
Messaging Service



FIPA Message Header



Predefined FIPA Message Parameters



Predefined FIPA Message Types